

REMARKS

With this amendment, claims 75-90 are pending in the application. New claims 75-90 introduce no new subject matter. Support for the new claims is replete throughout the specification and claims as originally filed. Examples of specific supporting portions of the applications are indicated below in Table 1.

New claims 75-90 are copied from claims 1-8 and 10-17 of US Patent 6,103,199, with the following modifications.

First, the claims and dependencies are renumbered to conform to claim numbering in the present case and to the claims which are presented.

Second, the wording of certain claims is modified as noted in detail in Table 1.

Table 1, below, sets forth claims from the '199 patent and the present claims along with example support for each claim limitation as found in the present application. Applicants note that the presented claims are fully supported by the specification and claims of the present case, as filed. In addition to the support below, additional support for many, if not all of the limitations, can be found in other portions of the claims and specification as filed.

Therefore, no new matter is added to the specification by the new claims and Applicants respectfully request that the claims be entered.

Please note that in Table 1, bracketed language appears in the indicated claim of the '199 patent, but is omitted from the corresponding claim in the present application. Underlined language is present in the new claims presented herewith, but not in the corresponding claim in the '199 patent.

CONCLUSION

In view of the foregoing, Applicants believe that no new matter has been introduced. Early examination on the merits is respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 510-337-7871.

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Respectfully submitted,

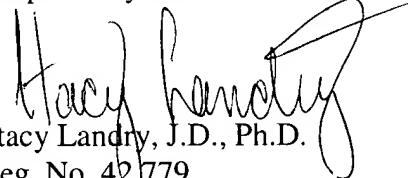

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TABLE 1

	6,103,199	Present Application
Claim 1 in '199 patent. Claim 75 in present application.	An apparatus for conducting a microfluidic process, said apparatus comprising:	The present invention generally provides methods and devices for microfluidic analysis. For example, Figure 7, element #704 illustrates an apparatus for microfluidic processes (Page 35, line 32, to page 37, line 15). In addition, page 7, lines 3-9, generally describes microfluidic devices for screening compounds.
	(a) a first plate comprising an array of sample [receiving elements] <u>access ports</u> adapted for receiving a plurality of samples from an array of sample containers and dispensing said samples, and	Figure 7, element #708, illustrates an array of sample receiving elements or access ports on microfluidic device 704. Page 15, lines 19-29, provides that the access ports for receiving samples are disposed within a first surface or cover layer. Figure 7, element #711, illustrates an array of sample containers from which access ports receive samples (page 36, lines 4-14). The samples are then dispensed into microfluidic device 704 through the access ports as described, e.g., on page 36, lines 4-9. See also, page 15, line 26, to page 16, line 30, for description of access ports and dispensing of samples.
	(b) a second plate integral with said first plate for receiving said dispensed samples, said second plate comprising a planar array of microfluidic networks of cavity structures and channels for conducting a microfluidic process	Page 14, lines 25-35, describes microfluidic channels fabricated into a surface. Page 15, lines 19-29 provide that the surface or plate comprising the microfluidic channels is integral with another plate or cover layer comprising access ports. In addition, Figure 7, element #706 illustrates example microfluidic networks comprising channels and cavities.
Claim 2 in '199 patent. Claim 76 in present application.	An apparatus for conducting a microfluidic process, said apparatus comprising:	The present invention generally provides methods and devices for microfluidic analysis. For example, Figure 7, element #704, illustrates an apparatus for microfluidic processes (Page 35, line 32, to page 37, line 15). In addition, page 7, lines 3-9, generally describes microfluidic devices for screening compounds.
	(a) a first plate comprising an array of sample [receiving elements] <u>access ports</u> adapted for receiving a plurality of samples from an array of sample wells; and,	Figure 7, element #708, illustrates an array of sample receiving elements or access ports on microfluidic device 704. Page 15, lines 19-29, provides that the access ports for receiving samples are disposed within a first surface or cover layer. Figure 7, element #711, illustrates an array of sample containers, e.g., microwells, from which access ports receive samples (page 36, lines 4-14).
	(b) a second plate integral with said first plate, said second plate comprising a planar array of microfluidic networks of cavity structures and channels for conducting a microfluidic process wherein each of said microfluidic networks is adapted for fluid communication with a corresponding sample [receiving element] <u>access port</u> of said first plate.	Page 14, lines 25-35, describes microfluidic channels fabricated into a surface. Page 15, lines 19-29 provide that the surface or plate comprising the microfluidic channels is integral with another plate or cover layer comprising access ports. In addition, Figure 7, element #706, illustrates example microfluidic networks comprising channels and cavities in fluid communication with a corresponding access port (Page 36, lines 4-9, and page 15, line 17 to page 16, line 30).
Claim 3 in '199 patent. Claim 77 in present application.	The apparatus of claim 2/76, wherein each of said sample [receiving elements] <u>access ports</u> comprises a [sample handling well] <u>reservoir</u> or <u>channel</u> that is in fluid communication with a corresponding capillary adapted to receive samples from one of said sample wells.	Figure 7, elements # 708 and # 711, illustrates an array of sample access ports/receiving elements and a sample source from which they receive samples. In addition, page 36, lines 4-14, describes pipettors or capillaries that are used with/comprise the sample access ports. Page 15, line 17, to page 16, line 30, also describes the access ports of the present invention in relation to reservoirs or channels for introduction into the device.

TABLE 1

Claim 4 in '199 patent. Claim 78 in present application.	The apparatus of claim 2/76, wherein said array of sample wells conforms to the format of a 96, 192, 384, or 1536 well plate.	Figure 7, elements # 708 and # 711, illustrates an array of sample access ports and a sample source, e.g., a microwell plate, from which they receive samples. In addition, this is described on page 36, lines 4-14.
Claim 5 in '199 patent. Claim 79 in present application.	The apparatus of claim 2/76 wherein each of said microfluidic networks comprises:	Figure 7, element #706, illustrates example microfluidic networks. (Page 36, lines 4-9, and page 15, line 17 to page 16, line 30)
	(a) a sample receiving cavity structure adapted for receiving sample from said corresponding sample [receiving element] <u>access port</u> , and	Figure 7, element #706, illustrates a microfluidic network comprising channels and one or more cavity structures in fluid communication with a corresponding access port for receiving samples, e.g., from sample wells in element #711.
	(b) one or more additional cavity structures in fluid communication with said sample receiving cavity structure.	Figure 7, element #706, illustrates a microfluidic network comprising channels and one or more cavity structures in fluid communication with a corresponding access port, e.g., for performing microfluidic analysis.
Claim 6 in '199 patent. Claim 80 in present application.	The apparatus of claim 2/76 wherein each of said microfluidic networks comprises:	Figure 7, element #706, illustrates example microfluidic networks. (Page 36, lines 4-9, and page 15, line 17 to page 16, line 30).
	(a) a sample receiving cavity structure adapted for receiving sample from said corresponding sample [receiving element] access port,	Figure 7, element #706, illustrates a microfluidic network comprising channels and one or more cavity structures in fluid communication with a corresponding access port for receiving samples, e.g., from sample wells in element #711. Page 36, lines 4-7, illustrates individual cavity structures with interface systems for introducing samples into microfluidic networks.
	(b) one or more waste cavity structures in [capillary] fluid communication with said sample receiving cavity structure,	Waste reservoirs or cavities are described in relation to microfluidic networks, e.g., on page 17, lines 29-33.
	(c) one or more buffer containing structures in [capillary] fluid communication with said sample receiving cavity structure.	Buffer reservoirs or cavities are described on page 18, lines 7-14, e.g., in relation to their use with microfluidic networks.
Claim 7 in '199 patent. Claim 81 in present application.	The apparatus of claim 6/80 wherein each of said microfluidic networks of cavity structures and channels comprises a tortuous path.	Page 34, lines 16-19, describes, e.g., serpentine and saw tooth channels.

TABLE 1

Claim 8 in '199 patent. Claim 82 in present application.	A kit comprising in packaged combination: (a) the apparatus of claim 1/75; and (b) reagents, other than reagents within said apparatus, for processing a sample.	Devices and reagents, e.g., pre-added reagents, are described, e.g., on page 18, lines 3-14. Reagents that can be added to the device and methods of doing so are described, e.g., on page 16, lines 1-30. In addition, various types of systems, reagents, and test compounds that can be studied using the devices of the invention are described, e.g., on page 7, lines 10-26, page 10, lines 5-19, and page 19, line 22, to page 20, line 33. See, also, Figure 7 illustrating addition of reagents to a microfluidic apparatus.
Claim 10 in '199 patent. Claim 83 in present application.	A method for processing an array of samples, said method comprising:	A method of processing multiple samples, e.g., an array of samples from a microwell plate, is described, e.g., on page 35, line 32, to page 37, line 15, describing the device in Figure 7 and its use in processing samples.
	(a) simultaneously transferring at least a portion of each sample in an array of sample wells to a corresponding array of sample [receiving elements] <u>access ports</u> that are part of a first plate comprising an array of sample [receiving elements] <u>access ports</u> adapted for receiving a plurality of samples from an array of sample wells,	Page 10, lines 29-32, describes simultaneous parallel screening, e.g., in a microwell array. In Figure 7, elements #708 illustrate an array of sample access ports into which samples are simultaneously transferred, e.g., from microwell plates. See, e.g., page 36, lines 4-15. The access ports are described e.g., on page 15, lines 19-29, providing that the access ports are disposed within a first surface or cover layer.
	(b) simultaneously transferring at least a portion of each sample from said sample [receiving elements] <u>access ports</u> to a corresponding array of microfluidic networks that is a part of a second plate integral with said first plate, said second plate comprising a planar array of microfluidic networks of cavity structures and channels for conducting a microfluidic process wherein each of said microfluidic networks is adapted for fluid communication with a corresponding sample [receiving element] <u>access port</u> , and	Figure 7 and the description thereof, e.g., page 35, line 32, to page 37, line 15, describe the transfer of reagents and samples from microwell plates (element 711) to sample access ports (element 708) to microfluidic networks (element 706). Page 10, lines 29-32, describes simultaneous parallel screening, e.g., in a microwell array. Page 14, lines 25-35, describes microfluidic channels fabricated into a surface. Page 15, lines 19-29, provides that the surface or plate comprising the microfluidic channels is integral with another plate or cover layer comprising access ports.
	(c) processing said array of samples.	Page 17, line 29, to page 18, line 21, describes processing sample compounds in example devices.
Claim 11 in '199 patent. Claim 84 in present application.	The method of claim 10/83, wherein said processing comprises conducting an analysis.	Page 17, line 29, to page 18, line 21, describes processing sample compounds, e.g., analysis and detection. In addition, page 14, lines 1-2, teaches that the devices of the invention can be used for analysis or synthesis.
Claim 12 in '199 patent. Claim 85 in present application.	The method of claim 10/83, wherein said processing comprises conducting a chemical synthesis.	Page 14, lines 1-2, teaches that the devices of the invention can be used for analysis or synthesis.

TABLE 1

Claim 13 in '199 patent. Claim 86 in present application.	The method of claim 10/83, wherein each of said sample [receiving elements] <u>access ports</u> comprises a [sample handling well] <u>reservoir or channel</u> that is in fluid communication with a corresponding capillary to receive sample from one of said sample wells.	Figure 7, elements # 708 and # 711, illustrates an array of sample access ports or capillaries and a sample source from which they receive samples. Sample reservoirs and channels and the introduction of samples into them are described, e.g., on page 16, lines 1-35.
Claim 14 in '199 patent. Claim 87 in present application.	The method of claim 10/83, wherein said array of sample wells conforms to the format of a 96, 192, 384, or 1536 well plate.	Figure 7, elements # 708 and # 711, illustrates an array of sample access ports and a sample source, e.g., a microwell plate, from which they receive samples. In addition, this is described on page 36, lines 4-14.
Claim 15 in '199 patent. Claim 88 in present application.	The method of claim 10/83 wherein each of said microfluidic networks comprises:	Microfluidic networks are described generally, e.g., on page 14, line 25, to page 15, line 37.
	(a) a sample receiving cavity structure adapted for receiving sample from said corresponding sample [receiving element] <u>access port</u> ; and,	Sample cavity structures used to introduce samples into devices from sample access ports or sources are described, e.g., on page 15, lines 30-37. Figure 7 illustrates multiple access ports with multiple corresponding networks.
	(b) one or more additional cavity structure in fluid communication with said sample receiving cavity structure.	Additional cavity structures, such as waste and buffer reservoirs, are described, e.g., on page 17, lines 29-33, and on page 18, lines 7-14.
Claim 16 in '199 patent. Claim 89 in present application.	The method of claim 10/83 wherein each of said microfluidic networks comprises:	Microfluidic networks are described generally, e.g., on page 14, line 25, to page 15, line 37.
	(a) a sample receiving cavity structure adapted for receiving sample from said corresponding sample [receiving element] <u>access port</u> ,	Sample channel structures used to introduce samples into devices from sample access ports or sources are described, e.g., on page 15, lines 30-37. Figure 7 illustrates multiple access ports with multiple corresponding networks.
	(b) one or more waste cavity structures in [capillary] <u>fluid</u> communication with said sample receiving cavity structure,	Waste reservoirs or cavities are described in relation to microfluidic networks, e.g., on page 17, lines 29-33.
	(c) one or more buffer containing structures in [capillary] <u>fluid</u> communication with said sample receiving cavity structure.	Buffer reservoirs or cavities are described on page 18, lines 7-14, e.g., in relation to their use with microfluidic networks.
Claim 17 in '199 patent. Claim 90 in present application.	The method of claim 10/83, wherein each of said microfluidic networks of interconnected cavity structures and channels of capillary dimension each comprises a tortuous path.	Page 34, lines 16-19, describes, e.g., serpentine and saw tooth channels.